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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/544,143	07/29/2005	Karl Thiele	US020474US	4967
24737 7590 06/30/2009 PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510				
EXAMINER ROZANSKI, MICHAEL T				
ART UNIT		PAPER NUMBER		
3768				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/544,143

Applicant(s)

THIELE, KARL

Examiner

MICHAEL T. ROZANSKI

Art Unit

3768

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-11, 14-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-11, 14-18 and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 7-11, 14-18, and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In regard to claims 1, 8, and 15, it is unclear how 3D ultrasound data is differentiated from 3D volumes. As such, 3D ultrasound data may be considered to be the data received at the transducer because this is the data used to create 3D images. In addition, it is unclear what a 3D volume is (Is it the 3D data formed similar to the 3D data formed in interpolation section 23 of Mochizuki? Is it data that is reconstructed and displayed?).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-11, 14-18, and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Mochizuki (US 6,263,093).

Mochizuki discloses a method and apparatus for 3D ultrasound image processing including a 3D ultrasound probe 10 for acquiring 3D data and display 40 for displaying data. The reception signal (echo data) in the form of two-dimensional data is read out from line memories 22A, 22B and are then input into a line interpolation section 23, which produces one or more of 3D interpolation data. By performing this line interpolation, the number of the ultrasound beams can be increased such that it is possible to improve the resolution of the 3D image (col 9, lines 27-44; see Figure 1). The interpolated 2D data produced in interpolation section 23 is then stored in memories 24A, 24B, after which frame interpolation section 30 interpolates between the adjacent frames. 3D memory 32 is then used to store data output from the frame interpolation section 30 (col 10, lines 35-48).

Response to Arguments

Applicant's arguments filed 6/1/09 have been fully considered but they are not persuasive. Applicant argues that Mochizuki does not teach that the interpolator interpolates 3D volumes derived from 3D ultrasound image data to obtain an interpolated 3D volume. Examiner disagrees. Mochizuki discloses that 3D ultrasound image data is stored in two dimensional memories 24A, 24B, and that the 3D data is stored in 3D memory 32. In addition, the reference specifically discloses that line interpolation section 23 produces 3D interpolation data (see col 9, lines 36-40; col 13, lines 33-50). In view of the 112 rejection above, the data fed into line interpolation section 23 is considered to be 3D image data because it is the data used to create 3D

images from the 3D probe 10. The created 3D data that is stored in memory 24A, 24B is considered to be the claimed 3D volume data.

In addition, the previous 112 rejection and 101 rejection is withdrawn due to Applicant's amendments.

Applicant's assertion that the previous action did not clearly address the claims is not persuasive. The action clearly states how the claimed elements relate to cited passages and figures that describe Applicant's invention. For example, while it may be confusing that Mochizuki discloses two "interpolation" sections 23, 30, the Office Action clearly characterizes (and provides appropriate passages and figure references) how these sections relate to the claimed interpolator. In fact, it appears that according to the pre-amended claim, either interpolation section 23, 30 would read on the claimed "interpolator" and either memory 22A, 22B or 24A, 24B would read on the claimed "memory." Therefore, this action is made Final.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. ROZANSKI whose telephone number is (571)272-1648. The examiner can normally be reached on Monday - Friday, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric F Winakur/
Primary Examiner, Art Unit 3768

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